

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) ~~A~~In a blood pressure measuring system, a method for determining central systolic pressure, comprising the steps of:

determining a time t from a pressure wave foot to a peak in a central carotid artery;

measuring an upper limb pressure ~~radial pressure~~-waveform with a sensor; and

locating the ~~pressure-wave foot in the radial pressure~~upper limb pressure waveform and determining the corresponding pressure at time t after the wave foot;

wherein said corresponding pressure is substantially the central systolic pressure.

2. (Currently amended) ~~A~~In a blood pressure measuring system, a method for determining central systolic pressure, comprising the steps of:

measuring an upper limb pressure ~~a radial pressure~~-waveform with a sensor;

locating ~~the~~ a time of the start of a component of said upper limb pressure waveform attributable to lower body wave reflection by analyzing derivatives of the upper limb pressure waveform; and

~~determining the central systolic pressure by taking the value of the pressure waveform at said time using a value of the upper limb pressure peripheral pressure waveform at said time to determine the central systolic pressure.~~

3. (Currently amended) The method according to claim 2, wherein said step of locating the time comprises the following steps:

determining ~~the~~ a peak of said measured ~~upper limb pressure~~ waveform;

determining if there is a minimum of a first derivative of said upper limb pressure waveform before said peak;

if a minimum is determined then treating the time is as being located at the occurrence ~~occurrence of the determined~~ said peak;

if no minimum is determined then:

searching for a first zero crossing of a second derivative of said upper limb pressure waveform from positive to negative after said peak and before incisura;

if a first zero crossing is found then treating the time ~~is~~ as being located at said first zero crossing;

if a first zero crossing is not found then:

searching for a zero crossing of a third derivative of said upper limb pressure waveform from positive to negative before said peak;

if a zero crossing is found then treating the time ~~is~~ as being located at the ~~occurrence~~ occurrence of the determined ~~said~~ peak;

if a zero crossing is not found then:

searching for a first zero crossing of the third derivative from positive to negative after said peak and ~~locating~~ treating the time as being at said zero crossing.

4. (Currently amended) The method according to claim 3, wherein said step of determining if there is a minimum of a first derivative of said upper limb pressure waveform before said peak comprises determining if there is a zero crossing of a second derivative from negative to positive before said peak.

Claims 5 and 6 (Cancelled)

7. (Currently amended) A ~~software-product~~ computer-readable medium having a computer-readable program for programming a device to determine the central systolic pressure according to the method of claim 1.

8. (Currently amended) A ~~software-product~~ computer-readable medium having a computer-readable program for programming a device to determine the central systolic pressure according to the method of claim 2.

9. (New) The method as recited in claim 1 wherein the measured upper limb pressure waveform is a radial pressure waveform measured using applanation tonometry.

10. (New) A method as recited in claim 2 wherein the measured upper limb pressure waveform is a radial pressure waveform measured using applanation tonometry.

11. (New) The method as recited in claim 1 wherein the measured upper limb pressure waveform is a brachial pressure waveform measured with a brachial cuff.

12. (New) A method as recited in claim 2 wherein the measured upper limb pressure waveform is a brachial pressure waveform measured with a brachial cuff .

13. (New) A method as recited in claim 2 further comprising the step of limiting the search for the time of the start of the component of the upper limb pressure waveform attributable to the lower body wave reflection to an initial 40% of the length of time of the upper limb pressure waveform after the wave foot for the waveform.

14. (New) A method as recited in claim 2 further comprising the step of limiting the search for the time of the start of a component of the upper limb pressure waveform attributable to the lower body wave reflection to a portion of the waveform after a first preselected length of time after the initial wave foot for the waveform.

15. (New) A method as recited in claim 2 further comprising the step of limiting the search to locate the time of the start of a component of the upper limb pressure waveform attributable to lower body wave reflection to a portion of the waveform before a preselected length of time after the initial wave foot of the upper limb pressure waveform.